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<110> Cadus Pharmaceutical Corporation

<120> YEAST CELLS EXPRESSING MODIFIED G PROTEINS AND METHODS
OF USE THEREFOR

<130> CPI-012C8PC

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<150> USSN 08/689,172

<151> 1996-08-06

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<151> 1993-03-31

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<170> PatentIn Ver. 2.0

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Leu Met

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Cys Cys Thr Leu Met
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Gln

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Leu

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Gln

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Cys

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<210> 105

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Tyr

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35 40 45

Ala Gly Glu Ser Gly Lys Ser Thr Val Leu Lys Gln Leu Lys Leu Leu
50 55 60

His Gln Gly Gly Phe Ser His Gln Glu Arg Leu Gln Tyr Ala Gln Val
65 70 75 80

Ile Trp Ala Asp Ala Ile Gln Ser Met Lys Ile Leu Ile Ile Gln Ala
85 90 95

Arg Lys Leu Gly Ile Gln Leu Asp Cys Asp Asp Pro Ile Asn Asn Lys
100 105 110

Asp Leu Phe Ala Cys Lys Arg Ile Leu Leu Lys Ala Lys Ala Leu Asp
115 120 125

Tyr Ile Asn Ala Ser Val Ala Gly Gly Ser Asp Phe Leu Asn Asp Tyr
130 135 140

Val Leu Lys Tyr Ser Glu Arg Tyr Glu Thr Arg Arg Arg Val Gln Ser
145 150 155 160

Thr Gly Arg Ala Lys Ala Ala Phe Asp Glu Asp Gly Asn Ile Ser Asn
165 170 175

Val Lys Ser Asp Thr Asp Arg Asp Ala Glu Thr Val Thr Gln Asn Glu
180 185 190

Asp Ala Asp Arg Asn Asn Ser Ser Arg Ile Asn Leu Gln Asp Ile Cys
 195 200 205
 Lys Asp Leu Asn Gln Glu Gly Asp Asp Gln Met Phe Val Arg Lys Thr
 210 215 220
 Ser Arg Glu Ile Gln Gly Gln Asn Arg Arg Asn Leu Ile His Glu Asp
 225 230 235 240
 Ile Ala Lys Ala Ile Lys Gln Leu Trp Asn Asn Asp Lys Gly Ile Lys
 245 250 255
 Gln Cys Phe Ala Arg Ser Asn Glu Phe Gln Leu Glu Gly Ser Ala Ala
 260 265 270
 Tyr Tyr Phe Asp Asn Ile Glu Lys Phe Ala Ser Pro Asn Tyr Val Cys
 275 280 285
 Thr Asp Glu Asp Ile Leu Lys Gly Arg Ile Lys Thr Thr Gly Ile Thr
 290 295 300
 Glu Thr Glu Phe Asn Ile Gly Ser Ser Lys Phe Lys Val Leu Asp Ala
 305 310 315 320
 Gly Gly Gln Arg Ser Glu Arg Lys Lys Trp Ile His Cys Phe Glu Gly
 325 330 335
 Ile Thr Ala Val Leu Phe Val Leu Ala Met Ser Glu Tyr Asp Gln Met
 340 345 350
 Leu Phe Glu Asp Glu Arg Val Asn Arg Met His Glu Ser Ile Met Leu
 355 360 365
 Phe Asp Thr Leu Leu Asn Ser Lys Trp Phe Lys Asp Thr Pro Phe Ile
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 Leu Phe Leu Asn Lys Ile Asp Leu Phe Glu Glu Lys Val Lys Ser Met
 385 390 395 400
 Pro Ile Arg Lys Tyr Phe Pro Asp Tyr Gln Gly Arg Val Gly Asp Ala
 405 410 415
 Glu Ala Gly Leu Lys Tyr Phe Glu Lys Ile Phe Leu Ser Leu Asn Lys
 420 425 430
 Thr Asn Lys Pro Ile Tyr Val Lys Arg Thr Cys Ala Thr Asp Thr Gln
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			20					25					30		
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His	Gln	Gly	Gly	Phe	Ser	His	Gln	Glu	Arg	Leu	Gln	Tyr	Ala	Gln	Val
65					70					75					80
Ile	Trp	Ala	Asp	Ala	Ile	Gln	Ser	Met	Lys	Ile	Leu	Ile	Ile	Gln	Ala
				85					90					95	
Arg	Lys	Leu	Gly	Ile	Gln	Leu	Asp	Cys	Asp	Asp	Pro	Ile	Asn	Asn	Lys
		100						105					110		
Asp	Leu	Phe	Ala	Cys	Lys	Arg	Ile	Leu	Leu	Lys	Ala	Lys	Ala	Leu	Asp
		115					120					125			
Tyr	Ile	Asn	Ala	Ser	Val	Ala	Gly	Gly	Ser	Asp	Phe	Leu	Asn	Asp	Tyr
	130					135					140				
Val	Leu	Lys	Tyr	Ser	Glu	Arg	Tyr	Glu	Thr	Arg	Arg	Arg	Val	Gln	Ser
145					150					155					160
Thr	Gly	Arg	Ala	Lys	Ala	Ala	Phe	Asp	Glu	Asp	Gly	Asn	Ile	Ser	Asn
				165					170					175	
Val	Lys	Ser	Asp	Thr	Asp	Arg	Asp	Ala	Glu	Thr	Val	Thr	Gln	Asn	Glu
			180					185					190		
Asp	Ala	Asp	Arg	Asn	Asn	Ser	Ser	Arg	Ile	Asn	Leu	Gln	Asp	Ile	Cys
		195					200					205			
Lys	Asp	Leu	Asn	Gln	Glu	Gly	Asp	Asp	Gln	Met	Phe	Val	Arg	Lys	Thr
	210					215					220				
Ser	Arg	Glu	Ile	Gln	Gly	Gln	Asn	Arg	Arg	Asn	Leu	Ile	His	Glu	Asp
225				230						235					240
Ile	Ala	Lys	Ala	Ile	Lys	Gln	Leu	Trp	Asn	Asn	Asp	Lys	Gly	Ile	Lys
				245					250					255	
Gln	Cys	Phe	Ala	Arg	Ser	Asn	Glu	Phe	Gln	Leu	Glu	Gly	Ser	Ala	Ala
			260					265					270		
Tyr	Tyr	Phe	Asp	Asn	Ile	Glu	Lys	Phe	Ala	Ser	Pro	Asn	Tyr	Val	Cys
		275					280					285			

Thr Asp Glu Asp Ile Leu Lys Gly Arg Ile Lys Thr Thr Gly Ile Thr
 290 295 300
 Glu Thr Glu Phe Asn Ile Gly Ser Ser Lys Phe Lys Val Leu Asp Ala
 305 310 315 320
 Gly Gly Gln Arg Ser Glu Arg Lys Lys Trp Ile His Cys Phe Glu Gly
 325 330 335
 Ile Thr Ala Val Leu Phe Val Leu Ala Met Ser Glu Tyr Asp Gln Met
 340 345 350
 Leu Phe Glu Asp Glu Arg Val Asn Arg Met His Glu Ser Ile Met Leu
 355 360 365
 Phe Asp Thr Leu Leu Asn Ser Lys Trp Phe Lys Asp Thr Pro Phe Ile
 370 375 380
 Leu Phe Leu Asn Lys Ile Asp Leu Phe Glu Glu Lys Val Lys Ser Met
 385 390 395 400
 Pro Ile Arg Lys Tyr Phe Pro Asp Tyr Gln Gly Arg Val Gly Asp Ala
 405 410 415
 Glu Ala Gly Leu Lys Tyr Phe Glu Lys Ile Phe Leu Ser Leu Asn Lys
 420 425 430
 Thr Asn Lys Pro Ile Tyr Val Lys Arg Thr Cys Ala Thr Asp Thr Gln
 435 440 445
 Thr Met Lys Phe Val Leu Ser Ala Val Thr Asp Leu Ile Ile Gln Gln
 450 455 460
 Asn Leu Lys Glu Tyr Asn Leu Val
 465 470

<210> 109
 <211> 472
 <212> PRT
 <213> Chimaera sp.

<400> 109
 Met Gly Cys Thr Val Ser Thr Gln Thr Ile Gly Asp Glu Ser Asp Pro
 1 5 10 15
 Phe Leu Gln Asn Lys Arg Ala Asn Asp Val Ile Glu Gln Ser Leu Gln
 20 25 30
 Leu Glu Lys Gln Arg Asp Lys Asn Glu Ile Lys Leu Leu Leu Gly
 35 40 45
 Ala Gly Glu Ser Gly Lys Ser Thr Val Leu Lys Gln Leu Lys Leu Leu
 50 55 60
 His Gln Gly Gly Phe Ser His Gln Glu Arg Leu Gln Tyr Ala Gln Val
 65 70 75 80

Ile Trp Ala Asp Ala Ile Gln Ser Met Lys Ile Leu Ile Ile Gln Ala
 85 90 95
 Arg Lys Leu Gly Ile Gln Leu Asp Cys Asp Asp Pro Ile Asn Asn Lys
 100 105 110
 Asp Leu Phe Ala Cys Lys Arg Ile Leu Leu Lys Ala Lys Ala Leu Asp
 115 120 125
 Tyr Ile Asn Ala Ser Val Ala Gly Gly Ser Asp Phe Leu Asn Asp Tyr
 130 135 140
 Val Leu Lys Tyr Ser Glu Arg Tyr Glu Thr Arg Arg Arg Val Gln Ser
 145 150 155 160
 Thr Gly Arg Ala Lys Ala Ala Phe Asp Glu Asp Gly Asn Ile Ser Asn
 165 170 175
 Val Lys Ser Asp Thr Asp Arg Asp Ala Glu Thr Val Thr Gln Asn Glu
 180 185 190
 Asp Ala Asp Arg Asn Asn Ser Ser Arg Ile Asn Leu Gln Asp Ile Cys
 195 200 205
 Lys Asp Leu Asn Gln Glu Gly Asp Asp Gln Met Phe Val Arg Lys Thr
 210 215 220
 Ser Arg Glu Ile Gln Gly Gln Asn Arg Arg Asn Leu Ile His Glu Asp
 225 230 235 240
 Ile Ala Lys Ala Ile Lys Gln Leu Trp Asn Asn Asp Lys Gly Ile Lys
 245 250 255
 Gln Cys Phe Ala Arg Ser Asn Glu Phe Gln Leu Glu Gly Ser Ala Ala
 260 265 270
 Tyr Tyr Phe Asp Asn Ile Glu Lys Phe Ala Ser Pro Asn Tyr Val Cys
 275 280 285
 Thr Asp Glu Asp Ile Leu Lys Gly Arg Ile Lys Thr Thr Gly Ile Thr
 290 295 300
 Glu Thr Glu Phe Asn Ile Gly Ser Ser Lys Phe Lys Val Leu Asp Ala
 305 310 315 320
 Gly Gly Gln Arg Ser Glu Arg Lys Lys Trp Ile His Cys Phe Glu Gly
 325 330 335
 Ile Thr Ala Val Leu Phe Val Leu Ala Met Ser Glu Tyr Asp Gln Met
 340 345 350
 Leu Phe Glu Asp Glu Arg Val Asn Arg Met His Glu Ser Ile Met Leu
 355 360 365
 Phe Asp Thr Leu Leu Asn Ser Lys Trp Phe Lys Asp Thr Pro Phe Ile
 370 375 380
 Leu Phe Leu Asn Lys Ile Asp Leu Phe Glu Glu Lys Val Lys Ser Met

385					390					395					400
Pro	Ile	Arg	Lys	Tyr	Phe	Pro	Asp	Tyr	Gln	Gly	Arg	Val	Gly	Asp	Ala
				405					410					415	
Glu	Ala	Gly	Leu	Lys	Tyr	Phe	Glu	Lys	Ile	Phe	Leu	Ser	Leu	Asn	Lys
			420					425					430		
Thr	Asn	Lys	Pro	Ile	Tyr	Val	Lys	Arg	Thr	Cys	Ala	Thr	Asp	Thr	Gln
		435					440					445			
Thr	Met	Lys	Phe	Val	Leu	Ser	Ala	Val	Thr	Asp	Leu	Ile	Ile	Gln	Gln
	450					455					460				
Asn	Leu	Lys	Asp	Ile	Met	Leu	Gln								
465					470										
<210>	110														
<211>	472														
<212>	PRT														
<213>	Chimaera sp.														
<400>	110														
Met	Gly	Cys	Thr	Val	Ser	Thr	Gln	Thr	Ile	Gly	Asp	Glu	Ser	Asp	Pro
1				5					10					15	
Phe	Leu	Gln	Asn	Lys	Arg	Ala	Asn	Asp	Val	Ile	Glu	Gln	Ser	Leu	Gln
			20					25					30		
Leu	Glu	Lys	Gln	Arg	Asp	Lys	Asn	Glu	Ile	Lys	Leu	Leu	Leu	Leu	Gly
		35					40					45			
Ala	Gly	Glu	Ser	Gly	Lys	Ser	Thr	Val	Leu	Lys	Gln	Leu	Lys	Leu	Leu
	50					55					60				
His	Gln	Gly	Gly	Phe	Ser	His	Gln	Glu	Arg	Leu	Gln	Tyr	Ala	Gln	Val
65					70					75					80
Ile	Trp	Ala	Asp	Ala	Ile	Gln	Ser	Met	Lys	Ile	Leu	Ile	Ile	Gln	Ala
				85					90					95	
Arg	Lys	Leu	Gly	Ile	Gln	Leu	Asp	Cys	Asp	Asp	Pro	Ile	Asn	Asn	Lys
			100					105					110		
Asp	Leu	Phe	Ala	Cys	Lys	Arg	Ile	Leu	Leu	Lys	Ala	Lys	Ala	Leu	Asp
		115					120					125			
Tyr	Ile	Asn	Ala	Ser	Val	Ala	Gly	Gly	Ser	Asp	Phe	Leu	Asn	Asp	Tyr
	130					135					140				
Val	Leu	Lys	Tyr	Ser	Glu	Arg	Tyr	Glu	Thr	Arg	Arg	Arg	Val	Gln	Ser
145					150					155					160
Thr	Gly	Arg	Ala	Lys	Ala	Ala	Phe	Asp	Glu	Asp	Gly	Asn	Ile	Ser	Asn
				165					170					175	
Val	Lys	Ser	Asp	Thr	Asp	Arg	Asp	Ala	Glu	Thr	Val	Thr	Gln	Asn	Glu

180					185					190					
Asp	Ala	Asp	Arg	Asn	Asn	Ser	Ser	Arg	Ile	Asn	Leu	Gln	Asp	Ile	Cys
	195						200					205			
Lys	Asp	Leu	Asn	Gln	Glu	Gly	Asp	Asp	Gln	Met	Phe	Val	Arg	Lys	Thr
	210					215					220				
Ser	Arg	Glu	Ile	Gln	Gly	Gln	Asn	Arg	Arg	Asn	Leu	Ile	His	Glu	Asp
	225					230					235				240
Ile	Ala	Lys	Ala	Ile	Lys	Gln	Leu	Trp	Asn	Asn	Asp	Lys	Gly	Ile	Lys
				245					250					255	
Gln	Cys	Phe	Ala	Arg	Ser	Asn	Glu	Phe	Gln	Leu	Glu	Gly	Ser	Ala	Ala
			260					265					270		
Tyr	Tyr	Phe	Asp	Asn	Ile	Glu	Lys	Phe	Ala	Ser	Pro	Asn	Tyr	Val	Cys
		275					280					285			
Thr	Asp	Glu	Asp	Ile	Leu	Lys	Gly	Arg	Ile	Lys	Thr	Thr	Gly	Ile	Thr
	290					295					300				
Glu	Thr	Glu	Phe	Asn	Ile	Gly	Ser	Ser	Lys	Phe	Lys	Val	Leu	Asp	Ala
	305					310					315				320
Gly	Gly	Gln	Arg	Ser	Glu	Arg	Lys	Lys	Trp	Ile	His	Cys	Phe	Glu	Gly
				325					330					335	
Ile	Thr	Ala	Val	Leu	Phe	Val	Leu	Ala	Met	Ser	Glu	Tyr	Asp	Gln	Met
			340					345					350		
Leu	Phe	Glu	Asp	Glu	Arg	Val	Asn	Arg	Met	His	Glu	Ser	Ile	Met	Leu
		355					360					365			
Phe	Asp	Thr	Leu	Leu	Asn	Ser	Lys	Trp	Phe	Lys	Asp	Thr	Pro	Phe	Ile
	370					375					380				
Leu	Phe	Leu	Asn	Lys	Ile	Asp	Leu	Phe	Glu	Glu	Lys	Val	Lys	Ser	Met
	385					390					395				400
Pro	Ile	Arg	Lys	Tyr	Phe	Pro	Asp	Tyr	Gln	Gly	Arg	Val	Gly	Asp	Ala
			405						410					415	
Glu	Ala	Gly	Leu	Lys	Tyr	Phe	Glu	Lys	Ile	Phe	Leu	Ser	Leu	Asn	Lys
			420					425					430		
Thr	Asn	Lys	Pro	Ile	Tyr	Val	Lys	Arg	Thr	Cys	Ala	Thr	Asp	Thr	Gln
		435					440					445			
Thr	Met	Lys	Phe	Val	Leu	Ser	Ala	Val	Thr	Asp	Leu	Ile	Ile	Gln	Gln
	450					455					460				
Asn	Leu	Lys	Gln	Tyr	Glu	Leu	Leu								
	465					470									

<210> 111

<211> 472
<212> PRT
<213> Chimaera sp.

<400> 111

Met	Gly	Cys	Thr	Val	Ser	Thr	Gln	Thr	Ile	Gly	Asp	Glu	Ser	Asp	Pro	
1				5					10					15		
Phe	Leu	Gln	Asn	Lys	Arg	Ala	Asn	Asp	Val	Ile	Glu	Gln	Ser	Leu	Gln	
			20					25					30			
Leu	Glu	Lys	Gln	Arg	Asp	Lys	Asn	Glu	Ile	Lys	Leu	Leu	Leu	Leu	Gly	
		35					40					45				
Ala	Gly	Glu	Ser	Gly	Lys	Ser	Thr	Val	Leu	Lys	Gln	Leu	Lys	Leu	Leu	
	50					55					60					
His	Gln	Gly	Gly	Phe	Ser	His	Gln	Glu	Arg	Leu	Gln	Tyr	Ala	Gln	Val	
65					70					75					80	
Ile	Trp	Ala	Asp	Ala	Ile	Gln	Ser	Met	Lys	Ile	Leu	Ile	Ile	Gln	Ala	
				85					90						95	
Arg	Lys	Leu	Gly	Ile	Gln	Leu	Asp	Cys	Asp	Asp	Pro	Ile	Asn	Asn	Lys	
		100						105					110			
Asp	Leu	Phe	Ala	Cys	Lys	Arg	Ile	Leu	Leu	Lys	Ala	Lys	Ala	Leu	Asp	
		115					120					125				
Tyr	Ile	Asn	Ala	Ser	Val	Ala	Gly	Gly	Ser	Asp	Phe	Leu	Asn	Asp	Tyr	
	130					135					140					
Val	Leu	Lys	Tyr	Ser	Glu	Arg	Tyr	Glu	Thr	Arg	Arg	Arg	Val	Gln	Ser	
145					150					155					160	
Thr	Gly	Arg	Ala	Lys	Ala	Ala	Phe	Asp	Glu	Asp	Gly	Asn	Ile	Ser	Asn	
			165					170						175		
Val	Lys	Ser	Asp	Thr	Asp	Arg	Asp	Ala	Glu	Thr	Val	Thr	Gln	Asn	Glu	
		180						185					190			
Asp	Ala	Asp	Arg	Asn	Asn	Ser	Ser	Arg	Ile	Asn	Leu	Gln	Asp	Ile	Cys	
		195					200					205				
Lys	Asp	Leu	Asn	Gln	Glu	Gly	Asp	Asp	Gln	Met	Phe	Val	Arg	Lys	Thr	
	210					215					220					
Ser	Arg	Glu	Ile	Gln	Gly	Gln	Asn	Arg	Arg	Asn	Leu	Ile	His	Glu	Asp	
225				230						235					240	
Ile	Ala	Lys	Ala	Ile	Lys	Gln	Leu	Trp	Asn	Asn	Asp	Lys	Gly	Ile	Lys	
			245					250					255			
Gln	Cys	Phe	Ala	Arg	Ser	Asn	Glu	Phe	Gln	Leu	Glu	Gly	Ser	Ala	Ala	
		260					265						270			
Tyr	Tyr	Phe	Asp	Asn	Ile	Glu	Lys	Phe	Ala	Ser	Pro	Asn	Tyr	Val	Cys	
		275					280					285				

Thr Asp Glu Asp Ile Leu Lys Gly Arg Ile Lys Thr Thr Gly Ile Thr
 290 295 300
 Glu Thr Glu Phe Asn Ile Gly Ser Ser Lys Phe Lys Val Leu Asp Ala
 305 310 315 320
 Gly Gly Gln Arg Ser Glu Arg Lys Lys Trp Ile His Cys Phe Glu Gly
 325 330 335
 Ile Thr Ala Val Leu Phe Val Leu Ala Met Ser Glu Tyr Asp Gln Met
 340 345 350
 Leu Phe Glu Asp Glu Arg Val Asn Arg Met His Glu Ser Ile Met Leu
 355 360 365
 Phe Asp Thr Leu Leu Asn Ser Lys Trp Phe Lys Asp Thr Pro Phe Ile
 370 375 380
 Leu Phe Leu Asn Lys Ile Asp Leu Phe Glu Glu Lys Val Lys Ser Met
 385 390 395 400
 Pro Ile Arg Lys Tyr Phe Pro Asp Tyr Gln Gly Arg Val Gly Asp Ala
 405 410 415
 Glu Ala Gly Leu Lys Tyr Phe Glu Lys Ile Phe Leu Ser Leu Asn Lys
 420 425 430
 Thr Asn Lys Pro Ile Tyr Val Lys Arg Thr Cys Ala Thr Asp Thr Gln
 435 440 445
 Thr Met Lys Phe Val Leu Ser Ala Val Thr Asp Leu Ile Ile Gln Gln
 450 455 460
 Asn Leu Lys Gln Leu Met Leu Gln
 465 470

<210> 112
 <211> 472
 <212> PRT
 <213> Chimaera sp.

<400> 112
 Met Gly Cys Thr Val Ser Thr Gln Thr Ile Gly Asp Glu Ser Asp Pro
 1 5 10 15
 Phe Leu Gln Asn Lys Arg Ala Asn Asp Val Ile Glu Gln Ser Leu Gln
 20 25 30
 Leu Glu Lys Gln Arg Asp Lys Asn Glu Ile Lys Leu Leu Leu Gly
 35 40 45
 Ala Gly Glu Ser Gly Lys Ser Thr Val Leu Lys Gln Leu Lys Leu Leu
 50 55 60
 His Gln Gly Gly Phe Ser His Gln Glu Arg Leu Gln Tyr Ala Gln Val
 65 70 75 80

Ile	Trp	Ala	Asp	Ala	Ile	Gln	Ser	Met	Lys	Ile	Leu	Ile	Ile	Gln	Ala	85	90	95
Arg	Lys	Leu	Gly	Ile	Gln	Leu	Asp	Cys	Asp	Asp	Pro	Ile	Asn	Asn	Lys	100	105	110
Asp	Leu	Phe	Ala	Cys	Lys	Arg	Ile	Leu	Leu	Lys	Ala	Lys	Ala	Leu	Asp	115	120	125
Tyr	Ile	Asn	Ala	Ser	Val	Ala	Gly	Gly	Ser	Asp	Phe	Leu	Asn	Asp	Tyr	130	135	140
Val	Leu	Lys	Tyr	Ser	Glu	Arg	Tyr	Glu	Thr	Arg	Arg	Arg	Val	Gln	Ser	145	150	155
Thr	Gly	Arg	Ala	Lys	Ala	Ala	Phe	Asp	Glu	Asp	Gly	Asn	Ile	Ser	Asn	165	170	175
Val	Lys	Ser	Asp	Thr	Asp	Arg	Asp	Ala	Glu	Thr	Val	Thr	Gln	Asn	Glu	180	185	190
Asp	Ala	Asp	Arg	Asn	Asn	Ser	Ser	Arg	Ile	Asn	Leu	Gln	Asp	Ile	Cys	195	200	205
Lys	Asp	Leu	Asn	Gln	Glu	Gly	Asp	Asp	Gln	Met	Phe	Val	Arg	Lys	Thr	210	215	220
Ser	Arg	Glu	Ile	Gln	Gly	Gln	Asn	Arg	Arg	Asn	Leu	Ile	His	Glu	Asp	225	230	235
Ile	Ala	Lys	Ala	Ile	Lys	Gln	Leu	Trp	Asn	Asn	Asp	Lys	Gly	Ile	Lys	245	250	255
Gln	Cys	Phe	Ala	Arg	Ser	Asn	Glu	Phe	Gln	Leu	Glu	Gly	Ser	Ala	Ala	260	265	270
Tyr	Tyr	Phe	Asp	Asn	Ile	Glu	Lys	Phe	Ala	Ser	Pro	Asn	Tyr	Val	Cys	275	280	285
Thr	Asp	Glu	Asp	Ile	Leu	Lys	Gly	Arg	Ile	Lys	Thr	Thr	Gly	Ile	Thr	290	295	300
Glu	Thr	Glu	Phe	Asn	Ile	Gly	Ser	Ser	Lys	Phe	Lys	Val	Leu	Asp	Ala	305	310	315
Gly	Gly	Gln	Arg	Ser	Glu	Arg	Lys	Lys	Trp	Ile	His	Cys	Phe	Glu	Gly	325	330	335
Ile	Thr	Ala	Val	Leu	Phe	Val	Leu	Ala	Met	Ser	Glu	Tyr	Asp	Gln	Met	340	345	350
Leu	Phe	Glu	Asp	Glu	Arg	Val	Asn	Arg	Met	His	Glu	Ser	Ile	Met	Leu	355	360	365
Phe	Asp	Thr	Leu	Leu	Asn	Ser	Lys	Trp	Phe	Lys	Asp	Thr	Pro	Phe	Ile	370	375	380

Leu Phe Leu Asn Lys Ile Asp Leu Phe Glu Glu Lys Val Lys Ser Met
 385 390 395 400
 Pro Ile Arg Lys Tyr Phe Pro Asp Tyr Gln Gly Arg Val Gly Asp Ala
 405 410 415
 Glu Ala Gly Leu Lys Tyr Phe Glu Lys Ile Phe Leu Ser Leu Asn Lys
 420 425 430
 Thr Asn Lys Pro Ile Tyr Val Lys Arg Thr Cys Ala Thr Asp Thr Gln
 435 440 445
 Thr Met Lys Phe Val Leu Ser Ala Val Thr Asp Leu Ile Ile Gln Gln
 450 455 460
 Asn Leu Lys Tyr Ile Gly Leu Cys
 465 470

<210> 113
 <211> 472
 <212> PRT
 <213> Chimaera sp.

<400> 113

Met Gly Cys Thr Val Ser Thr Gln Thr Ile Gly Asp Glu Ser Asp Pro
 1 5 10 15
 Phe Leu Gln Asn Lys Arg Ala Asn Asp Val Ile Glu Gln Ser Leu Gln
 20 25 30
 Leu Glu Lys Gln Arg Asp Lys Asn Glu Ile Lys Leu Leu Leu Gly
 35 40 45
 Ala Gly Glu Ser Gly Lys Ser Thr Val Leu Lys Gln Leu Lys Leu Leu
 50 55 60
 His Gln Gly Gly Phe Ser His Gln Glu Arg Leu Gln Tyr Ala Gln Val
 65 70 75 80
 Ile Trp Ala Asp Ala Ile Gln Ser Met Lys Ile Leu Ile Ile Gln Ala
 85 90 95
 Arg Lys Leu Gly Ile Gln Leu Asp Cys Asp Asp Pro Ile Asn Asn Lys
 100 105 110
 Asp Leu Phe Ala Cys Lys Arg Ile Leu Leu Lys Ala Lys Ala Leu Asp
 115 120 125
 Tyr Ile Asn Ala Ser Val Ala Gly Gly Ser Asp Phe Leu Asn Asp Tyr
 130 135 140
 Val Leu Lys Tyr Ser Glu Arg Tyr Glu Thr Arg Arg Arg Val Gln Ser
 145 150 155 160
 Thr Gly Arg Ala Lys Ala Ala Phe Asp Glu Asp Gly Asn Ile Ser Asn
 165 170 175

Val	Lys	Ser	Asp	Thr	Asp	Arg	Asp	Ala	Glu	Thr	Val	Thr	Gln	Asn	Glu
180						185						190			
Asp	Ala	Asp	Arg	Asn	Asn	Ser	Ser	Arg	Ile	Asn	Leu	Gln	Asp	Ile	Cys
195						200						205			
Lys	Asp	Leu	Asn	Gln	Glu	Gly	Asp	Asp	Gln	Met	Phe	Val	Arg	Lys	Thr
210						215						220			
Ser	Arg	Glu	Ile	Gln	Gly	Gln	Asn	Arg	Arg	Asn	Leu	Ile	His	Glu	Asp
225						230						235			
Ile	Ala	Lys	Ala	Ile	Lys	Gln	Leu	Trp	Asn	Asn	Asp	Lys	Gly	Ile	Lys
			245						250			255			
Gln	Cys	Phe	Ala	Arg	Ser	Asn	Glu	Phe	Gln	Leu	Glu	Gly	Ser	Ala	Ala
			260			265						270			
Tyr	Tyr	Phe	Asp	Asn	Ile	Glu	Lys	Phe	Ala	Ser	Pro	Asn	Tyr	Val	Cys
275						280						285			
Thr	Asp	Glu	Asp	Ile	Leu	Lys	Gly	Arg	Ile	Lys	Thr	Thr	Gly	Ile	Thr
290						295						300			
Glu	Thr	Glu	Phe	Asn	Ile	Gly	Ser	Ser	Lys	Phe	Lys	Val	Leu	Asp	Ala
305						310			315			320			
Gly	Gly	Gln	Arg	Ser	Glu	Arg	Lys	Lys	Trp	Ile	His	Cys	Phe	Glu	Gly
			325						330			335			
Ile	Thr	Ala	Val	Leu	Phe	Val	Leu	Ala	Met	Ser	Glu	Tyr	Asp	Gln	Met
			340			345						350			
Leu	Phe	Glu	Asp	Glu	Arg	Val	Asn	Arg	Met	His	Glu	Ser	Ile	Met	Leu
355						360						365			
Phe	Asp	Thr	Leu	Leu	Asn	Ser	Lys	Trp	Phe	Lys	Asp	Thr	Pro	Phe	Ile
370						375						380			
Leu	Phe	Leu	Asn	Lys	Ile	Asp	Leu	Phe	Glu	Glu	Lys	Val	Lys	Ser	Met
385						390			395			400			
Pro	Ile	Arg	Lys	Tyr	Phe	Pro	Asp	Tyr	Gln	Gly	Arg	Val	Gly	Asp	Ala
			405						410			415			
Glu	Ala	Gly	Leu	Lys	Tyr	Phe	Glu	Lys	Ile	Phe	Leu	Ser	Leu	Asn	Lys
			420			425						430			
Thr	Asn	Lys	Pro	Ile	Tyr	Val	Lys	Arg	Thr	Cys	Ala	Thr	Asp	Thr	Gln
435						440						445			
Thr	Met	Lys	Phe	Val	Leu	Ser	Ala	Val	Thr	Asp	Leu	Ile	Ile	Gln	Gln
450						455						460			
Asn	Leu	Lys	Gly	Cys	Gly	Leu	Tyr								
465			470												

<210> 114
<211> 472
<212> PRT
<213> Chimaera sp.

<400> 114

Met	Gly	Cys	Thr	Val	Ser	Thr	Gln	Thr	Ile	Gly	Asp	Glu	Ser	Asp	Pro
1				5					10					15	
Phe	Leu	Gln	Asn	Lys	Arg	Ala	Asn	Asp	Val	Ile	Glu	Gln	Ser	Leu	Gln
			20					25					30		
Leu	Glu	Lys	Gln	Arg	Asp	Lys	Asn	Glu	Ile	Lys	Leu	Leu	Leu	Leu	Gly
		35					40					45			
Ala	Gly	Glu	Ser	Gly	Lys	Ser	Thr	Val	Leu	Lys	Gln	Leu	Lys	Leu	Leu
	50					55					60				
His	Gln	Gly	Gly	Phe	Ser	His	Gln	Glu	Arg	Leu	Gln	Tyr	Ala	Gln	Val
65					70					75					80
Ile	Trp	Ala	Asp	Ala	Ile	Gln	Ser	Met	Lys	Ile	Leu	Ile	Ile	Gln	Ala
				85					90					95	
Arg	Lys	Leu	Gly	Ile	Gln	Leu	Asp	Cys	Asp	Asp	Pro	Ile	Asn	Asn	Lys
			100					105					110		
Asp	Leu	Phe	Ala	Cys	Lys	Arg	Ile	Leu	Leu	Lys	Ala	Lys	Ala	Leu	Asp
		115					120					125			
Tyr	Ile	Asn	Ala	Ser	Val	Ala	Gly	Gly	Ser	Asp	Phe	Leu	Asn	Asp	Tyr
	130					135					140				
Val	Leu	Lys	Tyr	Ser	Glu	Arg	Tyr	Glu	Thr	Arg	Arg	Arg	Val	Gln	Ser
145					150					155					160
Thr	Gly	Arg	Ala	Lys	Ala	Ala	Phe	Asp	Glu	Asp	Gly	Asn	Ile	Ser	Asn
				165					170					175	
Val	Lys	Ser	Asp	Thr	Asp	Arg	Asp	Ala	Glu	Thr	Val	Thr	Gln	Asn	Glu
			180					185					190		
Asp	Ala	Asp	Arg	Asn	Asn	Ser	Ser	Arg	Ile	Asn	Leu	Gln	Asp	Ile	Cys
		195					200					205			
Lys	Asp	Leu	Asn	Gln	Glu	Gly	Asp	Asp	Gln	Met	Phe	Val	Arg	Lys	Thr
	210					215					220				
Ser	Arg	Glu	Ile	Gln	Gly	Gln	Asn	Arg	Arg	Asn	Leu	Ile	His	Glu	Asp
225					230					235					240
Ile	Ala	Lys	Ala	Ile	Lys	Gln	Leu	Trp	Asn	Asn	Asp	Lys	Gly	Ile	Lys
				245					250					255	
Gln	Cys	Phe	Ala	Arg	Ser	Asn	Glu	Phe	Gln	Leu	Glu	Gly	Ser	Ala	Ala
			260					265					270		
Tyr	Tyr	Phe	Asp	Asn	Ile	Glu	Lys	Phe	Ala	Ser	Pro	Asn	Tyr	Val	Cys

275	280	285
Thr Asp Glu Asp Ile Leu Lys Gly Arg Ile Lys Thr Thr Gly Ile Thr 290 295 300		
Glu Thr Glu Phe Asn Ile Gly Ser Ser Lys Phe Lys Val Leu Asp Ala 305 310 315 320		
Gly Gly Gln Arg Ser Glu Arg Lys Lys Trp Ile His Cys Phe Glu Gly 325 330 335		
Ile Thr Ala Val Leu Phe Val Leu Ala Met Ser Glu Tyr Asp Gln Met 340 345 350		
Leu Phe Glu Asp Glu Arg Val Asn Arg Met His Glu Ser Ile Met Leu 355 360 365		
Phe Asp Thr Leu Leu Asn Ser Lys Trp Phe Lys Asp Thr Pro Phe Ile 370 375 380		
Leu Phe Leu Asn Lys Ile Asp Leu Phe Glu Glu Lys Val Lys Ser Met 385 390 395 400		
Pro Ile Arg Lys Tyr Phe Pro Asp Tyr Gln Gly Arg Val Gly Asp Ala 405 410 415		
Glu Ala Gly Leu Lys Tyr Phe Glu Lys Ile Phe Leu Ser Leu Asn Lys 420 425 430		
Thr Asn Lys Pro Ile Tyr Val Lys Arg Thr Cys Ala Thr Asp Thr Gln 435 440 445		
Thr Met Lys Phe Val Leu Ser Ala Val Thr Asp Leu Ile Ile Gln Gln 450 455 460		
Asn Leu Asp Glu Ile Asn Leu Leu 465 470		

<210> 115
 <211> 472
 <212> PRT
 <213> Chimaera sp.

<400> 115
 Met Gly Cys Thr Val Ser Thr Gln Thr Ile Gly Asp Glu Ser Asp Pro
 1 5 10 15
 Phe Leu Gln Asn Lys Arg Ala Asn Asp Val Ile Glu Gln Ser Leu Gln
 20 25 30
 Leu Glu Lys Gln Arg Asp Lys Asn Glu Ile Lys Leu Leu Leu Gly
 35 40 45
 Ala Gly Glu Ser Gly Lys Ser Thr Val Leu Lys Gln Leu Lys Leu Leu
 50 55 60
 His Gln Gly Gly Phe Ser His Gln Glu Arg Leu Gln Tyr Ala Gln Val

65	70	75	80
Ile Trp Ala Asp	Ala Ile Gln Ser Met Lys	Ile Leu Ile Ile Gln Ala	
	85	90	95
Arg Lys Leu Gly	Ile Gln Leu Asp Cys Asp	Asp Pro Ile Asn Asn Lys	
	100	105	110
Asp Leu Phe Ala	Cys Lys Arg Ile Leu Leu Lys	Ala Lys Ala Leu Asp	
	115	120	125
Tyr Ile Asn Ala	Ser Val Ala Gly Gly Ser Asp	Phe Leu Asn Asp Tyr	
	130	135	140
Val Leu Lys Tyr	Ser Glu Arg Tyr Glu Thr	Arg Arg Arg Val Gln Ser	
	145	150	155
Thr Gly Arg Ala	Lys Ala Ala Phe Asp	Glu Asp Gly Asn Ile Ser Asn	
	165	170	175
Val Lys Ser Asp	Thr Asp Arg Asp Ala Glu Thr	Val Thr Gln Asn Glu	
	180	185	190
Asp Ala Asp	Arg Asn Asn Ser Ser Arg	Ile Asn Leu Gln Asp Ile Cys	
	195	200	205
Lys Asp Leu Asn	Gln Glu Gly Asp Asp	Gln Met Phe Val Arg Lys Thr	
	210	215	220
Ser Arg Glu Ile	Gln Gly Gln Asn Arg Arg	Asn Leu Ile His Glu Asp	
	225	230	235
Ile Ala Lys Ala	Ile Lys Gln Leu Trp	Asn Asn Asp Lys Gly Ile Lys	
	245	250	255
Gln Cys Phe Ala	Arg Ser Asn Glu Phe Gln	Leu Glu Gly Ser Ala Ala	
	260	265	270
Tyr Tyr Phe Asp	Asn Ile Glu Lys Phe Ala	Ser Pro Asn Tyr Val Cys	
	275	280	285
Thr Asp Glu Asp	Ile Leu Lys Gly Arg Ile	Lys Thr Thr Gly Ile Thr	
	290	295	300
Glu Thr Glu Phe	Asn Ile Gly Ser Ser Lys	Phe Lys Val Leu Asp Ala	
	305	310	315
Gly Gly Gln Arg	Ser Glu Arg Lys Lys Trp	Ile His Cys Phe Glu Gly	
	325	330	335
Ile Thr Ala Val	Leu Phe Val Leu Ala Met	Ser Glu Tyr Asp Gln Met	
	340	345	350
Leu Phe Glu Asp	Glu Arg Val Asn Arg Met	His Glu Ser Ile Met Leu	
	355	360	365
Phe Asp Thr Leu	Leu Asn Ser Lys Trp Phe	Lys Asp Thr Pro Phe Ile	
	370	375	380

Leu Phe Leu Asn Lys Ile Asp Leu Phe Glu Glu Lys Val Lys Ser Met
 385 390 395 400

Pro Ile Arg Lys Tyr Phe Pro Asp Tyr Gln Gly Arg Val Gly Asp Ala
 405 410 415

Glu Ala Gly Leu Lys Tyr Phe Glu Lys Ile Phe Leu Ser Leu Asn Lys
 420 425 430

Thr Asn Lys Pro Ile Tyr Val Lys Arg Thr Cys Ala Thr Asp Thr Gln
 435 440 445

Thr Met Lys Phe Val Leu Ser Ala Val Thr Asp Leu Ile Ile Gln Gln
 450 455 460

Asn Leu Arg Gln Tyr Glu Leu Leu
 465 470

<210> 116
 <211> 67
 <212> DNA
 <213> Chimaera sp.

<400> 116
 acgtggtctc ccatgacttt ggaatctatt atggcttggt gtcttagtac gcaaacaata 60
 ggagacg 67

<210> 117
 <211> 21
 <212> DNA
 <213> Chimaera sp.

<400> 117
 gtatctttga accacttaga g 21

<210> 118
 <211> 478
 <212> PRT
 <213> Chimaera sp.

<400> 118
 Met Thr Leu Glu Ser Ile Met Ala Cys Cys Leu Ser Thr Gln Thr Ile
 1 5 10 15

Gly Asp Glu Ser Asp Pro Phe Leu Gln Asn Lys Arg Ala Asn Asp Val
 20 25 30

Ile Glu Gln Ser Leu Gln Leu Glu Lys Gln Arg Asp Lys Asn Glu Ile
 35 40 45

Lys Leu Leu Leu Leu Gly Ala Gly Glu Ser Gly Lys Ser Thr Val Leu
 50 55 60

Lys Gln Leu Lys Leu Leu His Gln Gly Gly Phe Ser His Gln Glu Arg
 65 70 75 80

Leu Gln Tyr Ala Gln Val Ile Trp Ala Asp Ala Ile Gln Ser Met Lys
 85 90 95

Ile Leu Ile Ile Gln Ala Arg Lys Leu Gly Ile Gln Leu Asp Cys Asp
 100 105 110

Asp Pro Ile Asn Asn Lys Asp Leu Phe Ala Cys Lys Arg Ile Leu Leu
 115 120 125

Lys Ala Lys Ala Leu Asp Tyr Ile Asn Ala Ser Val Ala Gly Gly Ser
 130 135 140

Asp Phe Leu Asn Asp Tyr Val Leu Lys Tyr Ser Glu Arg Tyr Glu Thr
 145 150 155 160

Arg Arg Arg Val Gln Ser Thr Gly Arg Ala Lys Ala Ala Phe Asp Glu
 165 170 175

Asp Gly Asn Ile Ser Asn Val Lys Ser Asp Thr Asp Arg Asp Ala Glu
 180 185 190

Thr Val Thr Gln Asn Glu Asp Ala Asp Arg Asn Asn Ser Ser Arg Ile
 195 200 205

Asn Leu Gln Asp Ile Cys Lys Asp Leu Asn Gln Glu Gly Asp Asp Gln
 210 215 220

Met Phe Val Arg Lys Thr Ser Arg Glu Ile Gln Gly Gln Asn Arg Arg
 225 230 235 240

Asn Leu Ile His Glu Asp Ile Ala Lys Ala Ile Lys Gln Leu Trp Asn
 245 250 255

Asn Asp Lys Gly Ile Lys Gln Cys Phe Ala Arg Ser Asn Glu Phe Gln
 260 265 270

Leu Glu Gly Ser Ala Ala Tyr Tyr Phe Asp Asn Ile Glu Lys Phe Ala
 275 280 285

Ser Pro Asn Tyr Val Cys Thr Asp Glu Asp Ile Leu Lys Gly Arg Ile
 290 295 300

Lys Thr Thr Gly Ile Thr Glu Thr Glu Phe Asn Ile Gly Ser Ser Lys
 305 310 315 320

Phe Lys Val Leu Asp Ala Gly Gly Gln Arg Ser Glu Arg Lys Lys Trp
 325 330 335

Ile His Cys Phe Glu Gly Ile Thr Ala Val Leu Phe Val Leu Ala Met
 340 345 350

Ser Glu Tyr Asp Gln Met Leu Phe Glu Asp Glu Arg Val Asn Arg Met
 355 360 365

His Glu Ser Ile Met Leu Phe Asp Thr Leu Leu Asn Ser Lys Trp Phe
 370 375 380

Lys Asp Thr Pro Phe Ile Leu Phe Leu Asn Lys Ile Asp Leu Phe Glu

385		390		395		400
Glu Lys Val Lys Ser Met Pro Ile Arg Lys Tyr Phe Pro Asp Tyr Gln						
	405			410		415
Gly Arg Val Gly Asp Ala Glu Ala Gly Leu Lys Tyr Phe Glu Lys Ile						
	420			425		430
Phe Leu Ser Leu Asn Lys Thr Asn Lys Pro Ile Tyr Val Lys Arg Thr						
	435			440		445
Cys Ala Thr Asp Thr Gln Thr Met Lys Phe Val Leu Ser Ala Val Thr						
	450			455		460
Asp Leu Ile Ile Gln Gln Asn Leu Lys Glu Tyr Asn Leu Val						
465		470		475		

<210> 119

<211> 23

<212> DNA

<213> Chimaera sp.

<400> 119

gtctaaaatg aagaggatag tag

23

<210> 120

<211> 38

<212> DNA

<213> Chimaera sp.

<400> 120

gatccgtctc acttcagaaa gacaacaagc cataatag

38

<210> 121

<211> 63

<212> DNA

<213> Chimaera sp.

<400> 121

gatccgtctc tgaagaagct aaggaggcta gaagaattaa tgatgtcatc gagcaatcgt 60
tgc 63

<210> 122

<211> 21

<212> DNA

<213> Chimaera sp.

<400> 122

gtatctttga accacttaga g

21

<210> 123

<211> 470

<212> PRT

<213> Chimaera sp.

<400> 123

Met Thr Leu Glu Ser Ile Met Ala Cys Cys Leu Ser Glu Glu Ala Lys

1	5	10	15
Glu Ala Arg Arg Ile Asn Asp Val Ile Glu Gln Ser Leu Gln Leu Glu	20	25	30
Lys Gln Arg Asp Lys Asn Glu Ile Lys Leu Leu Leu Leu Gly Ala Gly	35	40	45
Glu Ser Gly Lys Ser Thr Val Leu Lys Gln Leu Lys Leu Leu His Gln	50	55	60
Gly Gly Phe Ser His Gln Glu Arg Leu Gln Tyr Ala Gln Val Ile Trp	65	70	75
Ala Asp Ala Ile Gln Ser Met Lys Ile Leu Ile Ile Gln Ala Arg Lys	85	90	95
Leu Gly Ile Gln Leu Asp Cys Asp Asp Pro Ile Asn Asn Lys Asp Leu	100	105	110
Phe Ala Cys Lys Arg Ile Leu Leu Lys Ala Lys Ala Leu Asp Tyr Ile	115	120	125
Asn Ala Ser Val Ala Gly Gly Ser Asp Phe Leu Asn Asp Tyr Val Leu	130	135	140
Lys Tyr Ser Glu Arg Tyr Glu Thr Arg Arg Arg Val Gln Ser Thr Gly	145	150	155
Arg Ala Lys Ala Ala Phe Asp Glu Asp Gly Asn Ile Ser Asn Val Lys	165	170	175
Ser Asp Thr Asp Arg Asp Ala Glu Thr Val Thr Gln Asn Glu Asp Ala	180	185	190
Asp Arg Asn Asn Ser Ser Arg Ile Asn Leu Gln Asp Ile Cys Lys Asp	195	200	205
Leu Asn Gln Glu Gly Asp Asp Gln Met Phe Val Arg Lys Thr Ser Arg	210	215	220
Glu Ile Gln Gly Gln Asn Arg Arg Asn Leu Ile His Glu Asp Ile Ala	225	230	235
Lys Ala Ile Lys Gln Leu Trp Asn Asn Asp Lys Gly Ile Lys Gln Cys	245	250	255
Phe Ala Arg Ser Asn Glu Phe Gln Leu Glu Gly Ser Ala Ala Tyr Tyr	260	265	270
Phe Asp Asn Ile Glu Lys Phe Ala Ser Pro Asn Tyr Val Cys Thr Asp	275	280	285
Glu Asp Ile Leu Lys Gly Arg Ile Lys Thr Thr Gly Ile Thr Glu Thr	290	295	300
Glu Phe Asn Ile Gly Ser Ser Lys Phe Lys Val Leu Asp Ala Gly Gly	305	310	315
			320

Gln	Arg	Ser	Glu	Arg	Lys	Lys	Trp	Ile	His	Cys	Phe	Glu	Gly	Ile	Thr	325	330	335	
Ala	Val	Leu	Phe	Val	Leu	Ala	Met	Ser	Glu	Tyr	Asp	Gln	Met	Leu	Phe	340	345	350	
Glu	Asp	Glu	Arg	Val	Asn	Arg	Met	His	Glu	Ser	Ile	Met	Leu	Phe	Asp	355	360	365	
Thr	Leu	Leu	Asn	Ser	Lys	Trp	Phe	Lys	Asp	Thr	Pro	Phe	Ile	Leu	Phe	370	375	380	
Leu	Asn	Lys	Ile	Asp	Leu	Phe	Glu	Glu	Lys	Val	Lys	Ser	Met	Pro	Ile	385	390	395	400
Arg	Lys	Tyr	Phe	Pro	Asp	Tyr	Gln	Gly	Arg	Val	Gly	Asp	Ala	Glu	Ala	405	410	415	
Gly	Leu	Lys	Tyr	Phe	Glu	Lys	Ile	Phe	Leu	Ser	Leu	Asn	Lys	Thr	Asn	420	425	430	
Lys	Pro	Ile	Tyr	Val	Lys	Arg	Thr	Cys	Ala	Thr	Asp	Thr	Gln	Thr	Met	435	440	445	
Lys	Phe	Val	Leu	Ser	Ala	Val	Thr	Asp	Leu	Ile	Ile	Gln	Gln	Asn	Leu	450	455	460	
Lys	Glu	Tyr	Asn	Leu	Val											465	470		